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Chronic disease & risk factors

Results of the urban pilot project in Turin

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Social capital in local food systems: Increasing capabilities of diabetic people in deprived neighborhoods

Abstract

The pilot project was based on the hypothesis that social networks are the lever to change the relationship between the food system and health. This hypothesis is founded on a vast literature on innovation, but is not widely applied in the context of reducing health inequalities in urban contexts. The project team identified 8 important areas of application in the first phase of activity. The team then prepared the groundwork by working on social networks and local leaders in the Vallette district in Turin and conducted an experiment on one of these areas. The experiment showed the functioning of the social mechanisms that were expected following the theory. The result achieved was between 10 and 20 times the target of the project, therefore social innovation has a huge potential for social and economic impact. It must be built starting from the system and culture of food and health and it could be extended to all identified areas and applied systematically on the territory of the city of Turin.

The strategy to mobilize networks and natural leaders.

The project activity had been developed in 6 steps following a social capital based strategy.
First, the project team mapped the most important subjects and practices of the local food system and of social groups relevant for social activities and networking in the neighborhood (Vallette district in Turin). The focus was on behaviors related to food and health and on the role of social relationships. The mapping activity was oriented to understand the role played by the relationship between social networks and public health care services and the importance of culture in influencing social

behaviors. The map detected numerous social groups and we contacted directly more or less 30 groups/networks in witch are involved approximately 500/700 individuals.
Second, the project team mapped the local leaders, that are the subjects who have a recognized and referenced role for local inhabitants, even in very specific areas, such as micro contexts like buildings or groups of citizens. We checked that these subjects had formal and informal roles and different social conditions. This allowed the project team to get in touch and relate with natural leaders and network hubs. They will be involved in a direct and active way in the topic with a creative role.
Third, the project team engaged the subjects in identifying and designing new specific actions, in order to influence the functioning of the food system and reduce the health risks. The focus was on the culture and system of food and its relationship with health. 8 areas were identified and studied: 1) poverty and recovery of food and health, 2) physical activities of adults, diet and health, 3) food, social relationships and health in the local associative meeting places; 4) school age, physical activities and health; 5) dental prevention, food and health; 6) different cultures, food consumption and health; 7) role of large-scale food distribution in local social networks, 8) diabetes and preventative health behaviors.
The main characteristic of studied areas was to answer to specific needs with existent resources in the community or that could easily be activated.
Finally, the project team prepared the implementation of new activities, that were designed involving different subjects and methods tailored to the community and the neighborhood. In this way, the actions were appropriate to the needs of those involved and people were protagonists of initiatives that they will be able to manage. At the same time, the project achieved synergies and exchanges between these actions. This will encourage the development of a broad system of people mobilization and coordination skills by local leaders and institutions, who will be driven to contribute according to their functions. The links between the food system and other aspects of the local system, such as health, was improved in a participative way.
The main activity carried out was the social experiment supposed in the approved project, in order to test theories on social innovation using social networks. The experiment results are useful to encourage specific actions in the field of food culture and health prevention, because show the potential of social relationships and trust in order to influence preventive behavior.
However, the following aspects of the strategy need to be carefully defined.
The planned action was based on four theoretical principles:

- in-depth knowledge about the behavior of all people is available in social networks;
- this information is essential to identify serious personal risks;
- an incentive is essential to mobilize the network: an important goal (saving the health of one's friends or family) must be understood and embraced by individuals;
- fiduciary relationships (not the formal or bureaucratic obligations) in the network and with the subjects who relate to the network allow to achieve the result of using network information and changing behaviors.

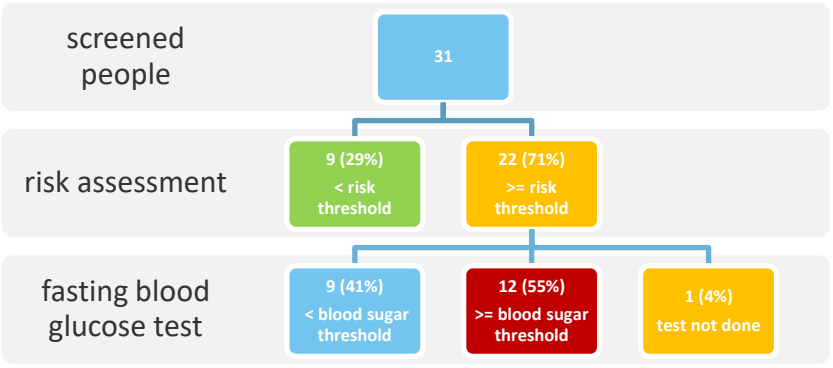
To apply the theory the project team took the following steps:

- in-depth meetings with the networks in their meeting places / environments in the neighborhood to share the goal and explain the risks of diabetes and the possibility of prevention, with specialists but in a way understandable to ordinary people, were carried out;
- criteria to recognize the risks among friends, acquaintances and family members (overweight, type of diet, food culture, familiarity with the disease, etc.) to invite them to do a check in the pharmacy were defined and shared in the meetings;

- vouchers to be presented to the pharmacy by people at risk who are not already under treatment and have never had tests, (FINDRISK questionnaire and fasting glycemic control) were prepared and given to the members of the 7 networks;
- an agreement with the federation of pharmacies (Federfarma) and with 3 pharmacies in the neighborhood to carry out checks on those who show up with the voucher was signed; people who tested positive were sent to the personal physician to start treatment and prevention of disabling complications.

The main outcomes of the social capital leverage

The pilot goal was to reduce the prevalence of NCDs, particularly through the target groups of diabetics.
As we know, social processes have an incremental impact over time, so the added value of activities is expected to grow incrementally in the years 2022-2024. Considering the economic and social advantages of the activities implemented by the project, our assessment show that the balance between project financing and project spin-offs is highly positive already after some months of activity.
The most important impact indicator for calculating this balance, which must be accounted for in the added value, is the reduction in the probability of death and early disability of people suffering from or at risk of diabetes. It is calculated for each the direct health costs and the years lived in disability and disease, through the DALYs metric (ie disability-adjusted life years) which indicates the sum of the years of potential life lost due to premature mortality and years of productive life lost due to disability. The approximate cost of treatment per person of the early loss of self-sufficiency is valued between 20,000 and 50,000 euros/year.
Following the social theory, we involved in our experimentation 7 hubs of social networks, with which we have developed a relationship to motivate leaders and people. In each of them, natural leaders collaborated and the community was mobilized. In a few days, many hundreds of people were observed and 31 cases at risk were identified. They were persuaded by the network and presented themselves voluntarily to the pharmacy and were subjected to investigations with diagnostic tools (tests, physical measurements and blood tests in neighborhood pharmacies) as many as 21 were found to be at real risk and were informed and put in contact with the prevention physicians of the health system.



The evaluation team noted the extraordinary efficiency and effectiveness of social networks: all the 7 hubs contributed in the screening, two thirds of people invited to the exams were really at risk; the experiment, long prepared, lasted three weeks.
The estimated economic value of the health added value is around 700.000 euros, with a return near to twenty times the project investment.
Considering that probably are living in Turin 3-4.000 people with high risk of diabetes unknown by the health system (estimate of specialist diabetes services), we can roughly estimate that an investment of 2 million euros could be able to activate the research of 4.000 new cases with e direct social savings of 40 million euros. This entails a reduction of future social and economic costs for them, for their families, for health and social structures and for the community. These measurements adopt the perspective of impact finance assessment, which aims to identify a collective economic benefit when social activities modify individual and collective behaviors, reducing risks and preventing future costs. These costs are often not considered but they actually increase welfare costs, as well as inequalities and sufferings for people.
In fact, the impact of the project is more extensive, deeper and more structural: we observed the increase of individual and social capabilities of involved people, particularly among the more deprived individuals and families. They changed their behaviors concerning the relationship with the local food system and the health prevention. At the same time, the level of cooperation and integration between public and private institutional bodies that manage local food system, health services and other welfare services in the neighborhood increased.
Our network activity and the single social experiment can be considered as “a brick” for creating and implementing social mechanisms, capabilities and permanent social infrastructure. Particular attention must be paid to the new forms of coordination. Their effects can go beyond the perimeter of the food system. For example, creating mutual aid relationships on health prevention and food may open the way for other forms of cooperation, such us collective purchase, food donation, food surplus recovery and redistribution, etc. Cultivating a garden together (in a square, in a building, everywhere) means an approach to food as a commons, with social and health benefits, but also in ecological terms.

Learnings and recommendations

Even in the most deprived places, social networks have a great wealth of information and a great potential for the action of health services and the reduction of inequalities. To make these relationships usable, we need to be in tune with people and their social environments. This is not possible if the traditional bureaucratic operating methods of the services are maintained or if professional or power asymmetries are weighed against people. Action research theory helps to effectively set the relationship with social networks.
Obtaining the collaboration of people generates significant impacts both on the reduction of social risks and costs, and on the generation of stable social infrastructures, which can generate effects on many aspects of health in the community and on the ability of policies to achieve greater effectiveness.